

WHAT IS CLAIMED IS:

1. An audio amplifier electrical circuit comprising:
  - a. a pre-amplified audio circuit having volume control inputs;
  - b. an audio amplifier connected to the pre-amplified audio source that outputs an amplified audio signal;
  - c. a power supervisory circuit that monitors the power used by the audio amplifier; and
  - d. a volume control circuit that activates the volume control inputs when the supervisory circuit detects the power used by the audio amplifier is beyond a pre-determined limit.
2. The circuit of claim 1 wherein the pre-amplified audio circuit is a DAC which converts a digital audio signal to a pre-amplified audio signal.
3. The circuit of claim 1 wherein the volume control inputs are digital.
4. The circuit of claim 1 wherein the supervisory circuit detects a voltage supply to the audio amplifier falls below a pre-determined limit.
5. An audio amplifier system for driving computer speakers connected to a bus port comprising:
  - a. A bus port connection connectable to a computer from the audio amplifier system having data and power signals;
  - b. a DAC having volume control inputs and a bus interface which can be connected to a personal computer to receive a digital audio signal and output a corresponding analog audio signal;
  - c. an audio amplifier connected to the analog audio signal from the DAC that outputs an amplified audio signal for driving speakers;
  - d. a power supervisory circuit that monitors the power used by the audio amplifier; and

- e. a volume control circuit that activates the volume control inputs when the supervisory circuit detects the power used by the audio amplifier is beyond a pre-determined limit.
- 6. The system of claim 5 wherein the power used by the system is supplied over the bus port connected to the computer.
- 7. The system of claim 5 wherein the pre-amplified audio circuit is a DAC which converts a digital audio signal to a pre-amplified audio signal.
- 8. The system of claim 5 wherein the volume control inputs are digital.
- 9. The system of claim 5 wherein the supervisory circuit detects a voltage supply to the audio amplifier falls below a pre-determined limit.
- 10. The system of claim 5 wherein the supervisory circuit detects a voltage supply to the audio amplifier system falls below a pre-determined limit.
- 11. The system of claim 5 further comprising a resistor between the bus port power signal input and the audio amplifier to insure a voltage drop to the pre-determined limit when the audio amplifier draws current which approaches a limit specified by a bus port power signal specification.

12. An audio amplifier system for driving computer speakers connected to a USB port comprising:
- a. a bus port connection connectable to a computer from the audio amplifier system having data and power signals;
  - b. a USB DAC having volume control inputs and a USB interface which can be connected to a personal computer to receive a digital audio signal and output a corresponding analog audio signal;
  - c. an audio amplifier connected to the analog audio signal from the USB DAC that outputs an amplified audio signal for driving speakers;
  - d. a power supervisory circuit that monitors the power used by the audio amplifier; and
  - e. a volume control circuit that activates the volume control inputs when the supervisory circuit detects the power used by the audio amplifier is beyond a pre-determined limit.
13. The system of claim 12 wherein the power used by the system is supplied over the bus port connected to the computer.
14. The system of claim 12 wherein the pre-amplified audio circuit is a DAC which converts a digital audio signal to a pre-amplified audio signal.
15. The system of claim 12 wherein the volume control inputs are digital.
16. The system of claim 12 wherein the supervisory circuit detects a voltage supply to the audio amplifier falls below a pre-determined limit.
17. The system of claim 12 wherein the supervisory circuit detects a voltage supply to the audio amplifier system falls below a pre-determined limit.

18. The system of claim 12 further comprising a resistor between the bus port power signal input and the audio amplifier to insure a voltage drop to the pre-determined limit when the audio amplifier draws current which approaches a limit specified by a USB power signal specification.